

HCT CO., LTD.

CERTIFICATE OF COMPLIANCE

FCC Certification

Applicant Name:

Pantech Co., Ltd.

Address:

Pantech Bldg, I-2, DMC, Sangam-dong, Mapo-gu,

Seoul, 121-792, Korea

Date of Issue:

October 26, 2011

Test Site/Location:

HCT CO., LTD., 105-1, Jangam-ri, Majang-Myeon, Ichion-si,
Kyunggi-Do, Korea

Report No.: HCTR1110FR08

HCT FRN: 0005866421

FCC ID:

JYCP4100

APPLICANT:

Pantech Co., Ltd.

FCC Model(s):

P4100

EUT Type:

GSM/WCDMA/LTE Phone with Bluetooth / WLAN

Max. RF Output Power:

Wi-Fi 802.11a (5180~5240) (12.55 dBm)/ Wi-Fi 802.11a (5260~5350) (12.36 dBm)/
Wi-Fi 802.11a (5500~5700) (12.79 dBm)/ Wi-Fi 802.11n (5180~5240) (10.76 dBm)/
Wi-Fi 802.11n (5260~5350) (11.02 dBm)/ Wi-Fi 802.11n (5500~5700) (11.02 dBm)

Frequency Range:

5180 MHz - 5240 MHz (UNII 1)
5260 MHz - 5320 MHz (UNII 2)
5500 MHz - 5700 MHz (UNII 3)

Modulation type

OFDM

FCC Classification:

Unlicensed National Information Infrastructure(UNII)

FCC Rule Part(s):

Part 15.407

Engineering Statement:

The measurements shown in this report were made in accordance with the procedures indicated, and the emissions from this equipment were found to be within the limits applicable. I assume full responsibility for the accuracy and completeness of these measurements, and for the qualifications of all persons taking them.

HCT CO., LTD. Certifies that no party to this application has subject to a denial of Federal benefits that includes FCC benefits pursuant to section 5301 of the Anti-Drug Abuse Act of 1998, 21 U.S. C.853(a)



Report prepared by

: Jong Seok Lee

Test engineer of RF Team



Approved by

: Chang Seok Choi

Manager of RF Team

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Version

TEST REPORT NO.	DATE	DESCRIPTION
HCTR1110FR08	October 26, 2011	- First Approval Report

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1. GENERAL INFORMATION

Applicant: Pantech Co., Ltd.

Address: Pantech Bldg, I-2, DMC, Sangam-dong, Mapo-gu, Seoul, 121-792, Korea

FCC ID: JYCP4100

EUT Type: GSM/WCDMA/LTE Phone with Bluetooth / WLAN

FCC Model Name: P4100

Date(s) of Tests: August 09,2011 ~ October 16, 2011

Contact person: Name: Jong Ku Park
Phone #: +82-2-2030-1358

Place of Tests: HCT Co., Ltd.
105-1, Jangam-ri , Majang-Myeon, Icheon-si, Kyunggi-Do, 467-811, KOREA.
(IC Recognition No. : 5944A-3)

2. EUT DESCRIPTION

EUT Type	GSM/WCDMA/LTE Phone with Bluetooth / WLAN
FCC Model Name	P4100
Power Supply	DC 3.7 V
Frequency Range	TX: 5180 MHz - 5240 MHz (UNII 1)/ 5260 MHz - 5320 MHz (UNII 2)/ 5500 MHz - 5700 MHz (UNII 3) RX: 5180 MHz - 5240 MHz (UNII 1)/ 5260 MHz - 5320 MHz (UNII 2)/ 5500 MHz - 5700 MHz (UNII 3)
Max. RF Output Power:	Wi-Fi 802.11a (UNII 1) (12.55 dBm)/ Wi-Fi 802.11a (UNII 2) (12.36 dBm)/ Wi-Fi 802.11a (UNII 3) (12.79 dBm)/ Wi-Fi 802.11n (UNII 1) (10.76 dBm)/ Wi-Fi 802.11n (UNII 2) (11.02 dBm)/ Wi-Fi 802.11n (UNII 3) (11.02 dBm)
Modulation Type	OFDM(802.11a, 802.11n)
Antenna Specification	Manufacturer: DONGNAM Antenna type: Internal Antenna Peak Gain : 5.7 dBi

3. TEST METHODOLOGY

The measurement procedure described in the American National Standard for Methods of Measurement of Radio-Noise Emission from Low-Voltage Electrical and Electronic Equipment in the Range of 9kHz to 40GHz(ANSI C63.4-2003)

3.1 EUT CONFIGURATION

The EUT configuration for testing is installed on RF field strength measurement to meet the Commissions requirement and operating in a manner that intends to maximize its emission characteristics in a continuous normal application.

3.2 EUT EXERCISE

The EUT was operated in the engineering mode to fix the Tx frequency that was for the purpose of the measurements. According to its specifications, the EUT must comply with the requirements of the Section 15.207, 15.209 and 15.247 under the FCC Rules Part 15 Subpart C.

3.3 GENERAL TEST PROCEDURES

Conducted Emissions

The EUT is placed on the turntable, which is 0.8 m above ground plane. According to the requirements in Section 13.1.4.1 of ANSI C63.4. (Version :2003) Conducted emissions from the EUT measured in the frequency range between 0.15 MHz and 30MHz using CISPR Quasi-peak and average detector modes.

Radiated Emissions

The EUT is placed on a turn table, which is 0.8 m above ground plane. The turntable shall rotate 360 degrees to determine the position of maximum emission level. EUT is set 3 m away from the receiving antenna, which varied from 1 m to 4 m to find out the highest emission. And also, each emission was to be maximized by changing the polarization of receiving antenna both horizontal and vertical. In order to find out the max. emission, the relative positions of this hand-held transmitter (EUT) was rotated through three orthogonal axes according to the requirements in Section 13.1.4.1 of ANSI C63.4. (Version: 2003)

3.4 DESCRIPTION OF TEST MODES

The EUT has been tested under operating condition. Test program used to control the EUT for staying in continuous transmitting and receiving mode is programmed.

Channel low, mid and high with highest data rate (worst case) is chosen for full testing.

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4. INSTRUMENT CALIBRATION

The measuring equipment, which was utilized in performing the tests documented herein, has been calibrated in accordance with the manufacturer's recommendations for utilizing calibration equipments, which is traceable to recognized national standards.

5. FACILITIES AND ACCREDITATIONS

5.1 FACILITIES

The SAC(Semi-Anechoic Chamber) and conducted measurement facility used to collect the radiated data are located at the 105-1, Jangam-ri, Majang-Myeon, Icheon-si, Kyunggi-Do, 467-811, Korea. The site is constructed in conformance with the requirements of ANSI C63.4. (Version :2003) and CISPR Publication 22. Detailed description of test facility was submitted to the Commission and accepted dated March 02, 2011 (Registration Number: 90661)

5.2 EQUIPMENT

Radiated emissions are measured with one or more of the following types of Linearly polarized antennas: tuned dipole, bi-conical, log periodic, bi-log, and/or ridged waveguide, horn. Spectrum analyzers with pre-selectors and quasi-peak detectors are used to perform radiated measurements. Conducted emissions are measured with Line Impedance Stabilization Networks and EMI Test Receivers. Calibrated wideband preamplifiers, coaxial cables, and coaxial attenuators are also used for making measurements.

All receiving equipment conforms to CISPR Publication 16-1, "Radio Interference Measuring Apparatus and Measurement Methods."

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6. ANTENNA REQUIREMENTS

According to FCC 47 CFR §15.203:

“An intentional radiator antenna shall be designed to ensure that no antenna other than that furnished by the responsible party can be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this section.”

* The antennas of this E.U.T are permanently attached.

*The E.U.T Complies with the requirement of §15.203

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7. SUMMARY OF TEST RESULTS

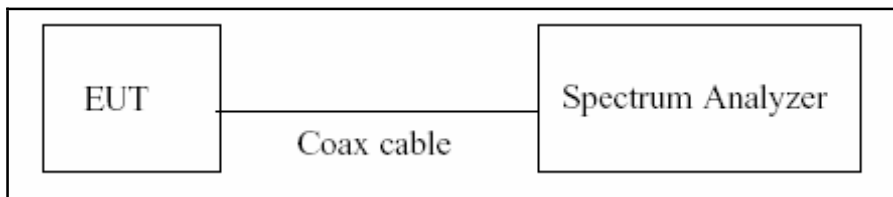
Test Description	FCC Part Section(s)	Test Limit	Test Condition	Test Result
TRANSMITTER MODE(TX)				
26dB Bandwidth	NA	NA	CONDUCTED	PASS
Maximum Conducted Output Power	§15.407(a)(1)	$< 4+10 \log_{10} (BW) \text{ dBm}$ (5150-5250 MHz) $< 11+10 \log_{10} (BW) \text{ dBm}$ (5250-5350 MHz) $< 11+10 \log_{10} (BW) \text{ dBm}$ (5470-5725 MHz)		PASS
Peak Power Spectral Density	§15.407(a)(1), (5)	$< 4 \text{ dBm/ MHz}$ (5150-5250) $< 11 \text{ dBm/ MHz}$ (5250-5350) $< 11 \text{ dBm/ MHz}$ (5470-5725)		PASS
Peak Excursion	§15.407(a)(6)	$< 13 \text{ dB/ MHz}$ maximum difference		PASS
Frequency Stability	§15.407(g)	NA		PASS
Undesirable Emissions	§15.407(b)(1), (2), (3)	$< -27 \text{ dBm/ MHz EIRP}$ (5150-5350 MHz, 5470-5725 MHz)	RADIATED	PASS
General Field Strength Limits(Restricted Bands and Radiated Emission Limits)	15.205, 5.407(b)(1), (5), (6)	Emissions in restricted bands must meet the radiated limits detailed in 15.209 (RSS-210 Table 3 Limits)		PASS
AC Conducted Emissions 150 kHz-30 MHz	15.207	$< \text{FCC 15.207 limits or}$ $< \text{RSS-Gen table 2 limits}$	LINE CONDUCTED	PASS

7. TEST RESULT

7.1 26dB BANDWIDTH MEASUREMENT

The bandwidth at 26 dB down from the highest in-band spectral density is measured with a spectrum analyzer connected to the antenna terminal while the EUT is operating in transmission mode at the appropriate frequencies. The 26 dB bandwidth is used to determine the conducted power limits.

■ TEST CONFIGURATION



■ TEST PROCEDURE

The transmitter output is connected to the Spectrum Analyzer.

The Spectrum Analyzer is set to

RBW: 100 kHz

VBW: 100 kHz

SPAN: 40 MHz

■ TEST RESULTS

Conducted 26dB Bandwidth Measurements for 802.11a

802.11a Mode		Measured Bandwidth [MHz]	Minimum Bandwidth [MHz]	Pass / Fail
Frequency [MHz]	Channel No.			
5180	36	19.15	N/A	Pass
5200	40	19.36	N/A	Pass
5240	48	19.05	N/A	Pass

Conducted 26dB Bandwidth Measurements for 802.11a

802.11a Mode		Measured Bandwidth [MHz]	Minimum Bandwidth [MHz]	Pass / Fail
Frequency [MHz]	Channel No.			
5260	52	19.15	N/A	Pass
5300	60	19.32	N/A	Pass
5320	64	19.13	N/A	Pass

Conducted 26dB Bandwidth Measurements for 802.11a

802.11a Mode		Measured Bandwidth [MHz]	Minimum Bandwidth [MHz]	Pass / Fail
Frequency [MHz]	Channel No.			
5500	100	19.68	N/A	Pass
5600	120	19.33	N/A	Pass
5700	140	19.31	N/A	Pass

■ TEST RESULTS

Conducted 26dB Bandwidth Measurements for 802.11n

802.11n Mode		Measured Bandwidth [MHz]	Minimum Bandwidth [MHz]	Pass / Fail
Frequency [MHz]	Channel No.			
5180	36	19.87	N/A	Pass
5200	40	20.28	N/A	Pass
5240	48	20.12	N/A	Pass

Conducted 26dB Bandwidth Measurements for 802.11n

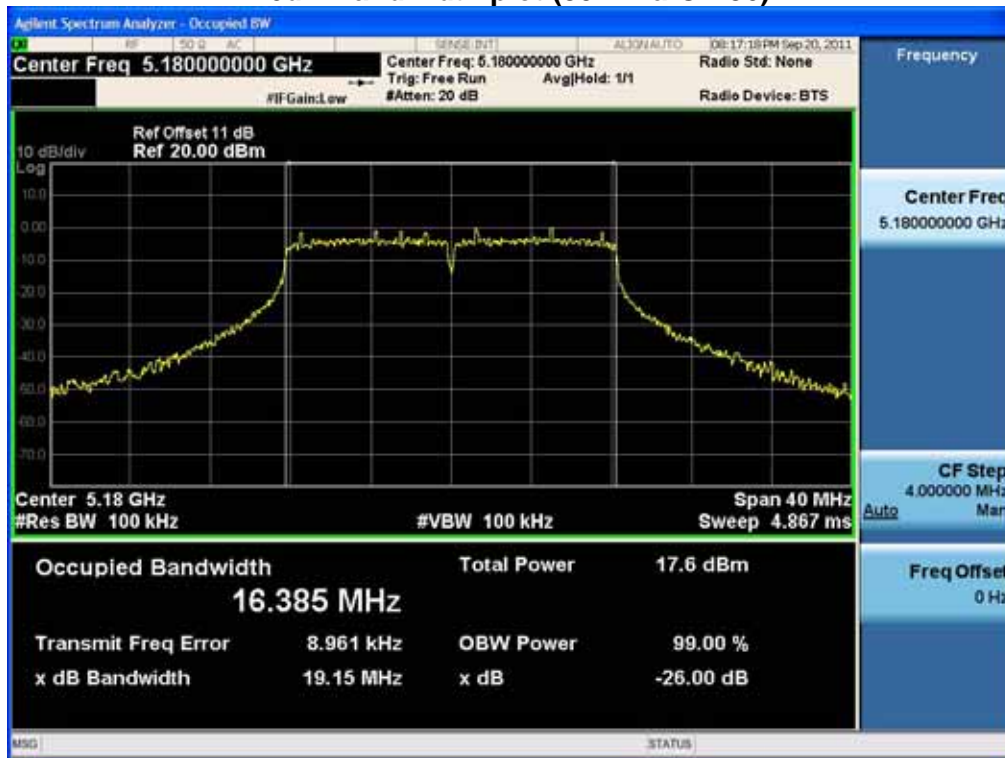
802.11n Mode		Measured Bandwidth [MHz]	Minimum Bandwidth [MHz]	Pass / Fail
Frequency [MHz]	Channel No.			
5260	52	20.28	N/A	Pass
5300	60	20.34	N/A	Pass
5320	64	19.86	N/A	Pass

Conducted 26dB Bandwidth Measurements for 802.11n

802.11n Mode		Measured Bandwidth [MHz]	Minimum Bandwidth [MHz]	Pass / Fail
Frequency [MHz]	Channel No.			
5500	100	20.14	N/A	Pass
5600	120	20.10	N/A	Pass
5700	140	20.26	N/A	Pass

■ RESULT PLOTS

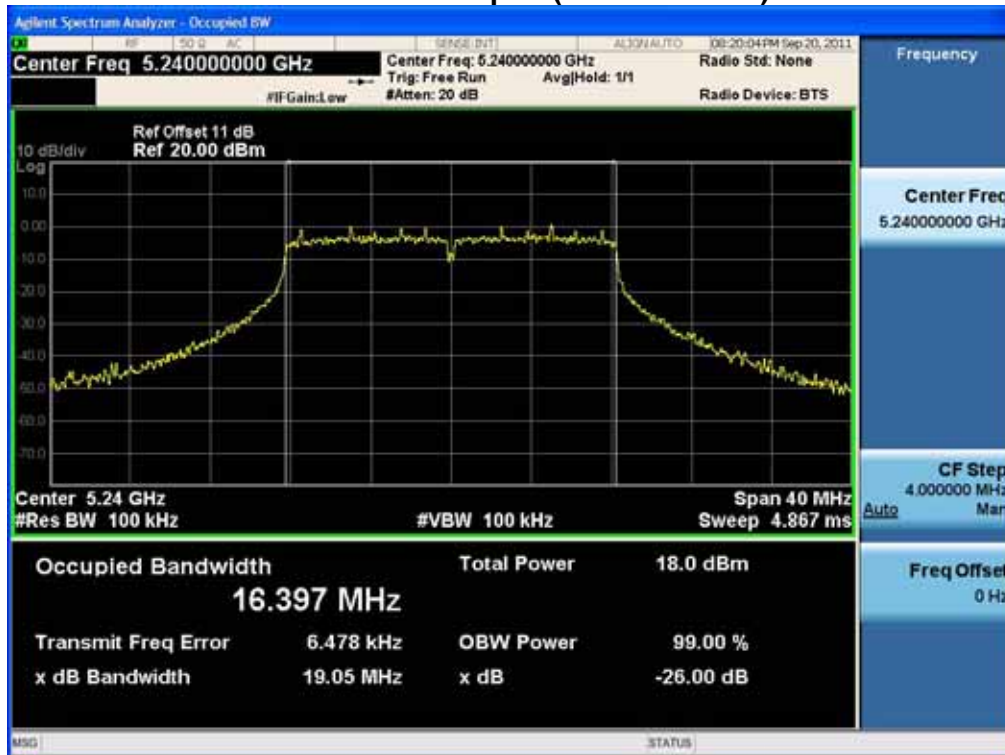
26dB Bandwidth plot (802.11a-CH 36)



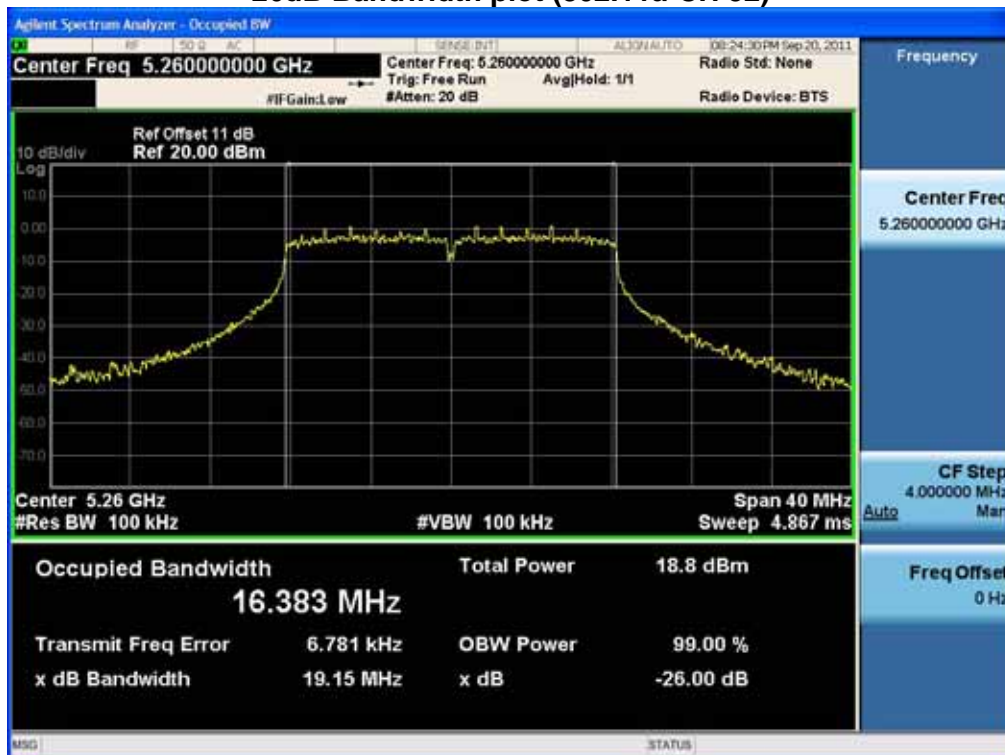
26dB Bandwidth plot (802.11a-CH 40)



26dB Bandwidth plot (802.11a-CH 48)



26dB Bandwidth plot (802.11a-CH 52)



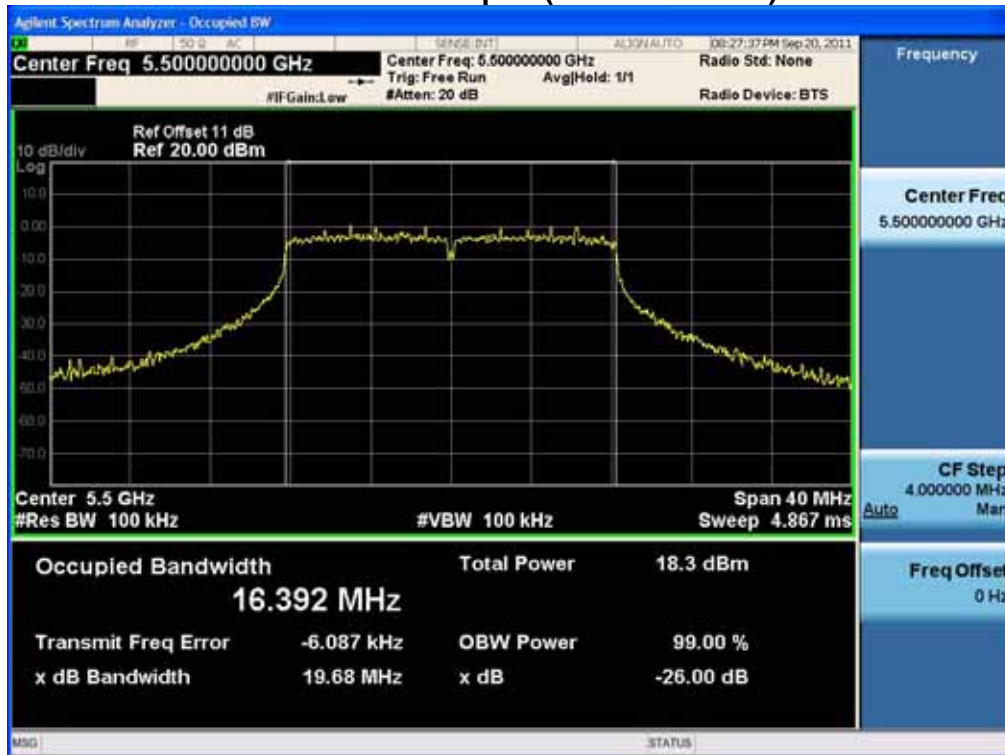
26dB Bandwidth plot (802.11a-CH 60)



26dB Bandwidth plot (802.11a-CH 64)



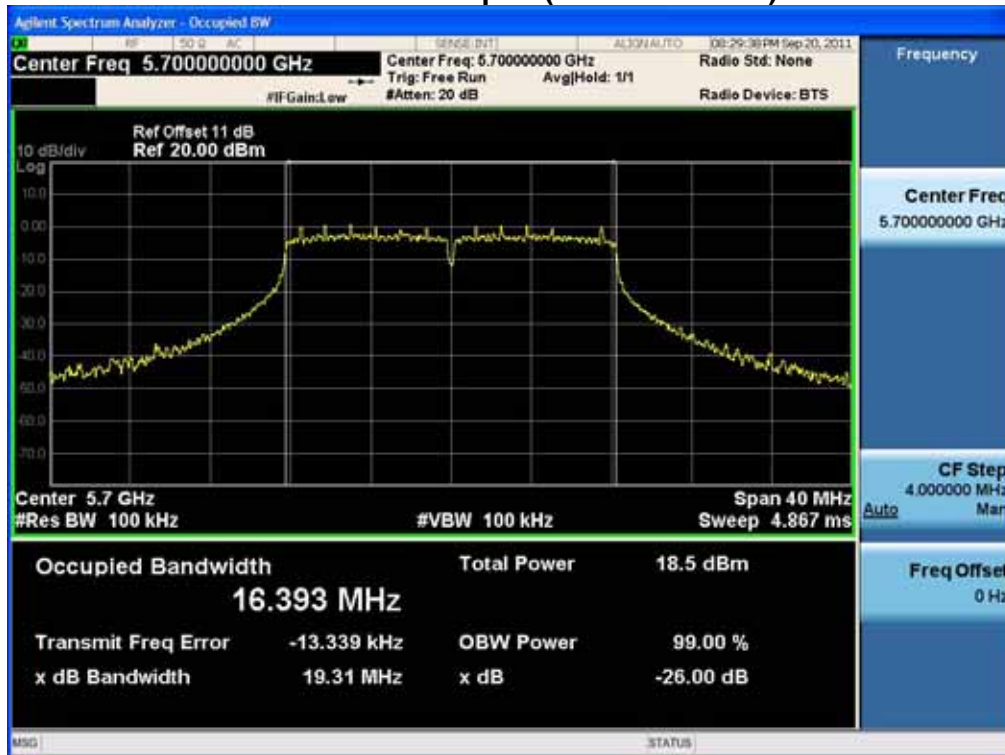
26dB Bandwidth plot (802.11a-CH 100)



26dB Bandwidth plot (802.11a-CH 120)



26dB Bandwidth plot (802.11a-CH 140)



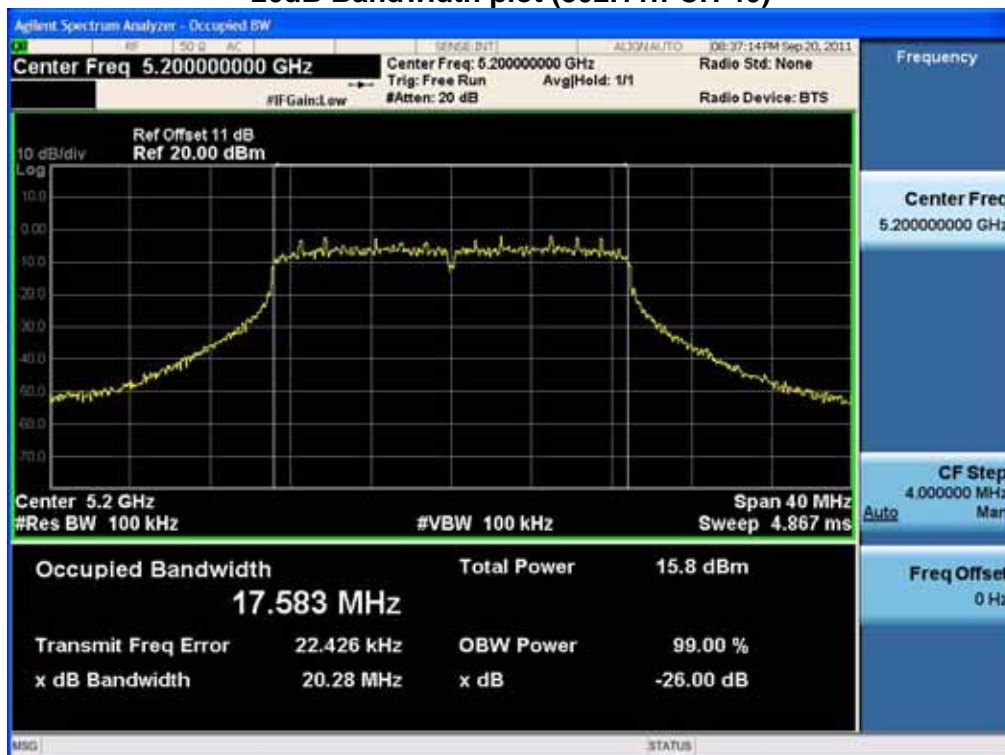
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■ RESULT PLOTS

26dB Bandwidth plot (802.11n-CH 36)



26dB Bandwidth plot (802.11n-CH 40)



26dB Bandwidth plot (802.11n-CH 48)



26dB Bandwidth plot (802.11n-CH 52)



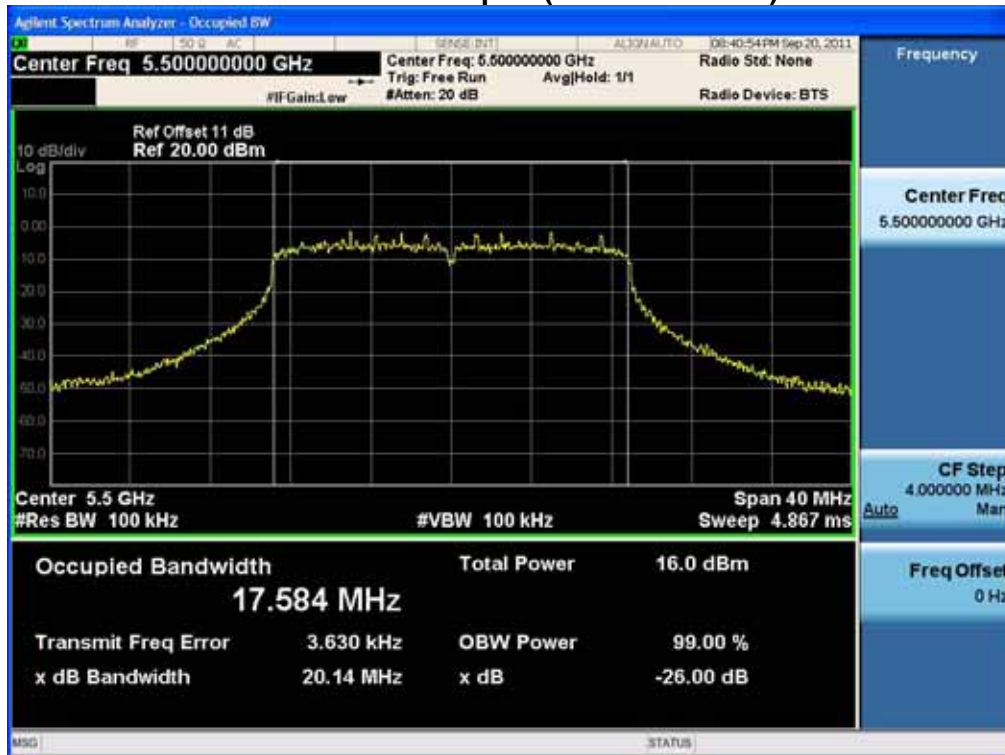
26dB Bandwidth plot (802.11n-CH 60)



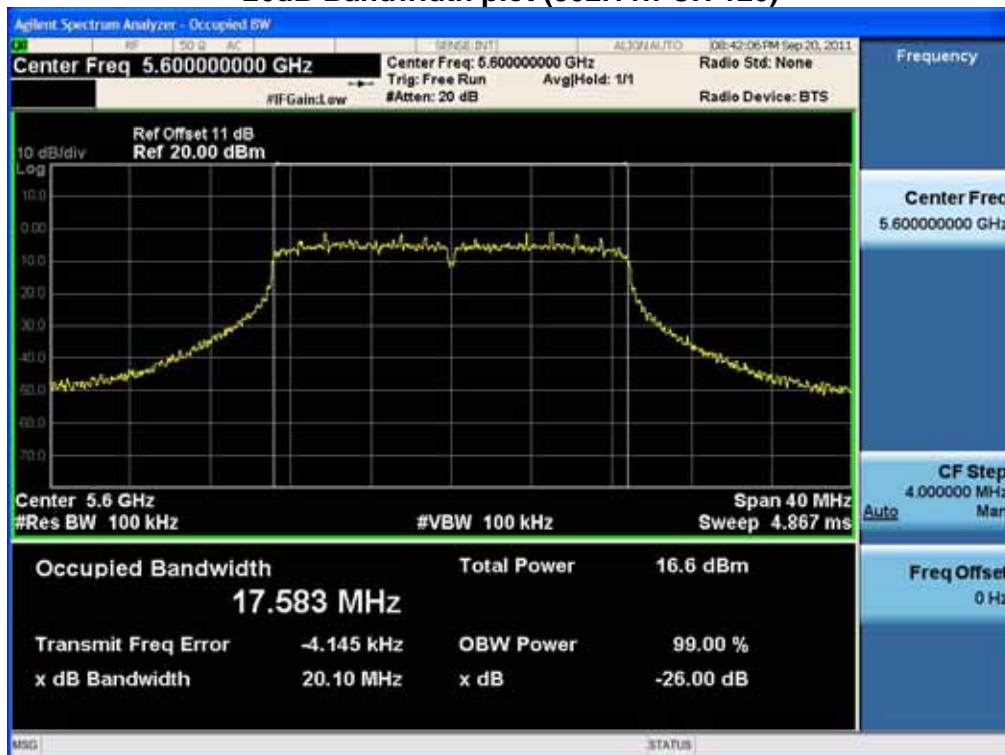
26dB Bandwidth plot (802.11n-CH 64)



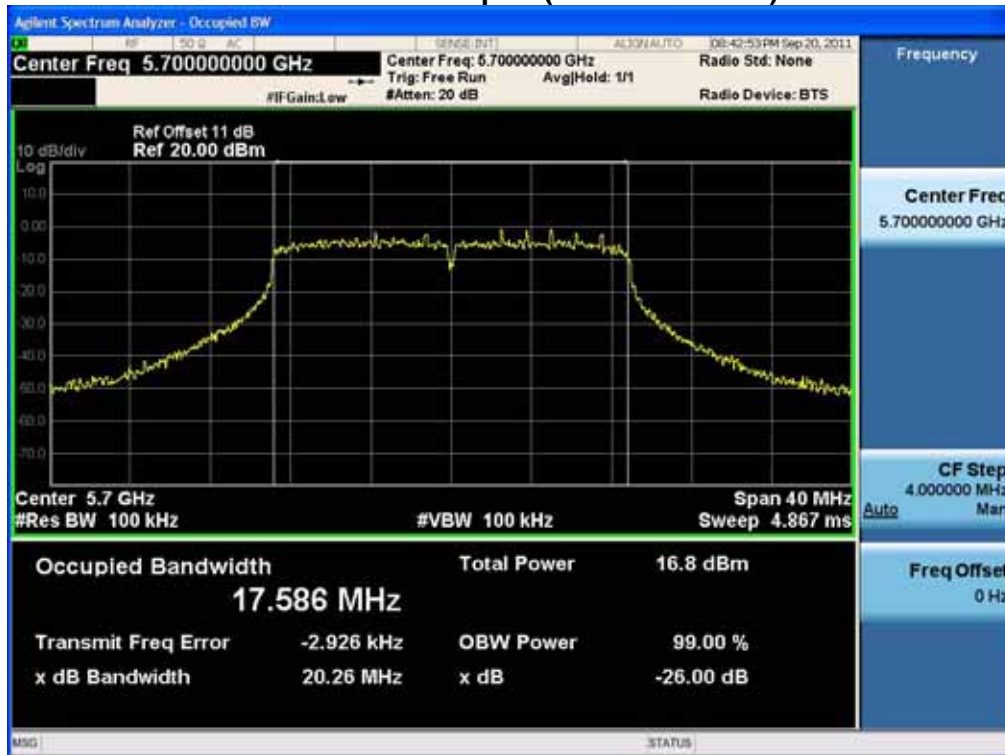
26dB Bandwidth plot (802.11n-CH 100)



26dB Bandwidth plot (802.11n-CH 120)



26dB Bandwidth plot (802.11n-CH 140)



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7.2 OUTPUT POWER MEASUREMENT

Test Requirements and limit, §15.247(b)(3)

A transmitter antenna terminal of EUT is connected to the input of a Spectrum Analyzer.

Measurement is made while the EUT is operating in transmission mode at the appropriate frequencies. In the 5.15 – 5.25 GHz band, the maximum permissible conducted output power is the lesser of 50 mW (16.99 dBm) and $4 \text{ dBm} + 10 \log_{10} (26 \text{ dB BW})$

frequencies. In the 5.25 – 5.35 GHz band, the maximum permissible conducted output power is the lesser of 250 mW (23.98 dBm) and $11 \text{ dBm} + 10 \log_{10} (26 \text{ dB BW})$

frequencies. In the 5.47 – 5.725 GHz band, the maximum permissible conducted output power is the lesser of 250 mW (23.98 dBm) and $11 \text{ dBm} + 10 \log_{10} (26 \text{ dB BW})$

Limit : 802.11a_UNII-1 = 16.87 dBm

802.11n_UNII-1 = 16.99 dBm

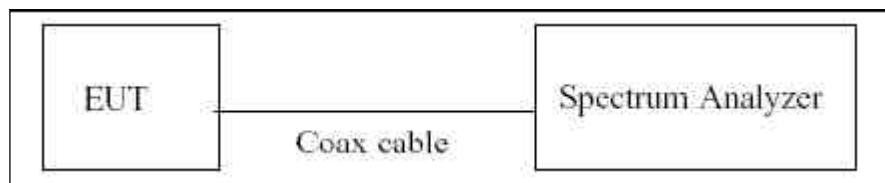
802.11a_UNII-1 = 23.86 dBm

802.11n_UNII-1 = 23.98 dBm

802.11a_UNII-1 = 23.94 dBm

802.11n_UNII-1 = 23.98 dBm

■ TEST CONFIGURATION



■ TEST PROCEDURE

The transmitter output is connected to the Spectrum Analyzer.

The Spectrum Analyzer is set to

RBW: 1 MHz

VBW: 1 MHz

SPAN: 40 MHz / 80 MHz (802.11n_40 MHz BW)

Detector Mode = Peak

■ TEST RESULTS

Conducted Output Power Measurements (802.11a Mode: 5180~5240)

802.11a Mode		Rate (Mbps)	Measured Power(dBm)	Limit (dBm)
Frequency[MHz]	Channel No.			
5180	36	6 Mbps	12.23	30
		9 Mbps	12.13	30
		12 Mbps	12.16	30
		18 Mbps	12.17	30
		24 Mbps	12.00	30
		36 Mbps	11.87	30
		48 Mbps	10.45	30
		54 Mbps	9.52	30
5200	40	6 Mbps	12.48	30
		9 Mbps	12.46	30
		12 Mbps	12.35	30
		18 Mbps	12.32	30
		24 Mbps	12.20	30
		36 Mbps	12.13	30
		48 Mbps	10.80	30
		54 Mbps	9.79	30
5240	48	6 Mbps	12.39	30
		9 Mbps	12.55	30
		12 Mbps	12.45	30
		18 Mbps	12.34	30
		24 Mbps	12.32	30
		36 Mbps	12.23	30
		48 Mbps	11.22	30
		54 Mbps	10.22	30

■ TEST RESULTS

Conducted Output Power Measurements (802.11a Mode:5260~5320)

802.11a Mode		Rate (Mbps)	Measured Power(dBm)	Limit (dBm)
Frequency[MHz]	Channel No.			
5260	52	6 Mbps	12.27	30
		9 Mbps	12.06	30
		12 Mbps	11.91	30
		18 Mbps	11.96	30
		24 Mbps	12.36	30
		36 Mbps	12.18	30
		48 Mbps	11.28	30
		54 Mbps	10.21	30
5300	60	6 Mbps	12.11	30
		9 Mbps	12.19	30
		12 Mbps	12.04	30
		18 Mbps	12.01	30
		24 Mbps	11.80	30
		36 Mbps	11.74	30
		48 Mbps	10.74	30
		54 Mbps	9.14	30
5320	64	6 Mbps	11.70	30
		9 Mbps	11.88	30
		12 Mbps	11.62	30
		18 Mbps	11.69	30
		24 Mbps	11.51	30
		36 Mbps	11.27	30
		48 Mbps	10.23	30
		54 Mbps	8.61	30

■ TEST RESULTS

Conducted Output Power Measurements (802.11a Mode: 5500~5700)

802.11a Mode		Rate (Mbps)	Measured Power(dBm)	Limit (dBm)
Frequency[MHz]	Channel No.			
5500	100	6 Mbps	12.40	30
		9 Mbps	12.24	30
		12 Mbps	12.13	30
		18 Mbps	12.04	30
		24 Mbps	12.20	30
		36 Mbps	11.78	30
		48 Mbps	10.70	30
		54 Mbps	9.68	30
5600	120	6 Mbps	12.24	30
		9 Mbps	12.01	30
		12 Mbps	11.86	30
		18 Mbps	11.91	30
		24 Mbps	12.09	30
		36 Mbps	11.92	30
		48 Mbps	10.84	30
		54 Mbps	9.89	30
5700	140	6 Mbps	12.79	30
		9 Mbps	12.59	30
		12 Mbps	12.39	30
		18 Mbps	12.43	30
		24 Mbps	12.22	30
		36 Mbps	12.23	30
		48 Mbps	11.20	30
		54 Mbps	9.75	30

■ TEST RESULTS

Conducted Output Power Measurements (802.11n Mode: 5180~5240)

802.11n Mode		Rate (Mbps)	Measured Power(dBm)	Limit (dBm)
Frequency[MHz]	Channel No.			
5180	36	6.5 Mbps	10.10	30
		13 Mbps	10.17	30
		19.5 Mbps	10.11	30
		26 Mbps	10.05	30
		39 Mbps	9.91	30
		52 Mbps	9.84	30
		58.5 Mbps	9.94	30
		65 Mbps	6.87	30
5200	40	6.5 Mbps	10.76	30
		13 Mbps	10.32	30
		19.5 Mbps	10.27	30
		26 Mbps	10.47	30
		39 Mbps	10.23	30
		52 Mbps	10.14	30
		58.5 Mbps	10.05	30
		65 Mbps	10.50	30
5240	48	6.5 Mbps	10.34	30
		13 Mbps	10.22	30
		19.5 Mbps	10.25	30
		26 Mbps	10.31	30
		39 Mbps	10.29	30
		52 Mbps	10.09	30
		58.5 Mbps	10.04	30
		65 Mbps	6.25	30

■ TEST RESULTS

Conducted Output Power Measurements (802.11n Mode:5260~5320)

802.11n Mode		Rate (Mbps)	Measured Power(dBm)	Limit (dBm)
Frequency[MHz]	Channel No.			
5260	52	6.5 Mbps	11.02	30
		13 Mbps	10.54	30
		19.5 Mbps	10.57	30
		26 Mbps	10.48	30
		39 Mbps	10.34	30
		52 Mbps	10.23	30
		58.5 Mbps	10.20	30
		65 Mbps	6.57	30
5300	60	6.5 Mbps	10.27	30
		13 Mbps	10.42	30
		19.5 Mbps	10.55	30
		26 Mbps	10.39	30
		39 Mbps	10.38	30
		52 Mbps	10.18	30
		58.5 Mbps	10.06	30
		65 Mbps	6.66	30
5320	64	6.5 Mbps	9.01	30
		13 Mbps	9.02	30
		19.5 Mbps	8.94	30
		26 Mbps	8.84	30
		39 Mbps	8.73	30
		52 Mbps	8.71	30
		58.5 Mbps	8.66	30
		65 Mbps	5.82	30

■ TEST RESULTS

Conducted Output Power Measurements (802.11n Mode: 5500~5700)

802.11n Mode		Rate (Mbps)	Measured Power(dBm)	Limit (dBm)
Frequency[MHz]	Channel No.			
5500	100	6.5 Mbps	10.18	30
		13 Mbps	10.21	30
		19.5 Mbps	10.05	30
		26 Mbps	9.84	30
		39 Mbps	9.81	30
		52 Mbps	9.65	30
		58.5 Mbps	9.81	30
		65 Mbps	6.25	30
5600	120	6.5 Mbps	10.79	30
		13 Mbps	10.43	30
		19.5 Mbps	10.62	30
		26 Mbps	10.07	30
		39 Mbps	9.94	30
		52 Mbps	9.87	30
		58.5 Mbps	9.83	30
		65 Mbps	6.49	30
5700	140	6.5 Mbps	10.87	30
		13 Mbps	11.02	30
		19.5 Mbps	10.91	30
		26 Mbps	10.89	30
		39 Mbps	10.75	30
		52 Mbps	10.68	30
		58.5 Mbps	10.60	30
		65 Mbps	7.25	30

■ RESULT PLOTS_5180 MHz ~ 5240 MHz

Conducted Output Power (802.11a-CH 36) 6 Mbps



Conducted Output Power (802.11a-CH 36) 9 Mbps



FCC PT.15.247 TEST REPORT	FCC CERTIFICATION REPORT		www.hct.co.kr
Test Report No. HCTR1110FR08	Date of Issue: October 26, 2011	EUT Type: GSM/WCDMA/LTE Phone with Bluetooth / WLAN	FCC ID: JYCP4100

Conducted Output Power (802.11a-CH 36) 12 Mbps



Conducted Output Power (802.11a-CH 36) 18 Mbps



FCC PT.15.247 TEST REPORT	FCC CERTIFICATION REPORT		www.hct.co.kr
Test Report No. HCTR1110FR08	Date of Issue: October 26, 2011	EUT Type: GSM/WCDMA/LTE Phone with Bluetooth / WLAN	FCC ID: JYCP4100

Conducted Output Power (802.11a-CH 36) 24 Mbps



Conducted Output Power (802.11a-CH 36) 36 Mbps



FCC PT.15.247 TEST REPORT	FCC CERTIFICATION REPORT		www.hct.co.kr
Test Report No. HCTR1110FR08	Date of Issue: October 26, 2011	EUT Type: GSM/WCDMA/LTE Phone with Bluetooth / WLAN	FCC ID: JYCP4100

Conducted Output Power (802.11a-CH 36) 48 Mbps



Conducted Output Power (802.11a-CH 36) 54 Mbps



FCC PT.15.247 TEST REPORT	FCC CERTIFICATION REPORT		www.hct.co.kr
Test Report No. HCTR1110FR08	Date of Issue: October 26, 2011	EUT Type: GSM/WCDMA/LTE Phone with Bluetooth / WLAN	FCC ID: JYCP4100

Conducted Output Power (802.11a-CH 40) 6 Mbps

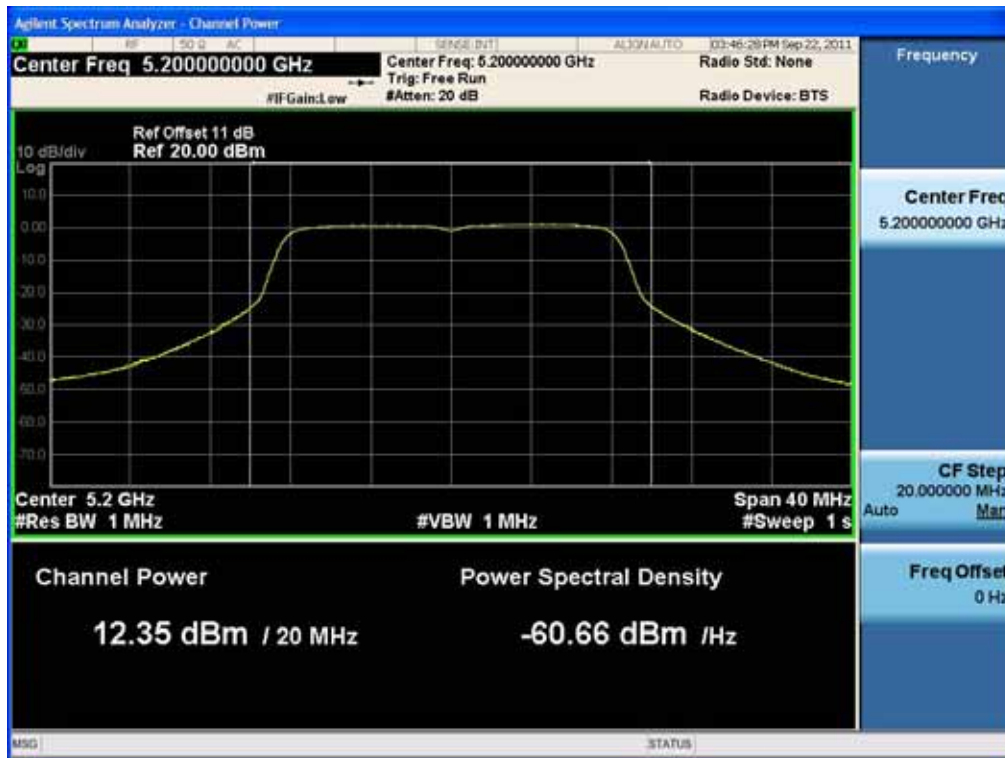


Conducted Output Power (802.11a-CH 40) 9 Mbps



FCC PT.15.247 TEST REPORT	FCC CERTIFICATION REPORT		www.hct.co.kr
Test Report No. HCTR1110FR08	Date of Issue: October 26, 2011	EUT Type: GSM/WCDMA/LTE Phone with Bluetooth / WLAN	FCC ID: JYCP4100

Conducted Output Power (802.11a-CH 40) 12 Mbps



Conducted Output Power (802.11a-CH 40) 18 Mbps



FCC PT.15.247 TEST REPORT	FCC CERTIFICATION REPORT		www.hct.co.kr
Test Report No. HCTR1110FR08	Date of Issue: October 26, 2011	EUT Type: GSM/WCDMA/LTE Phone with Bluetooth / WLAN	FCC ID: JYCP4100

Conducted Output Power (802.11a-CH 40) 24 Mbps

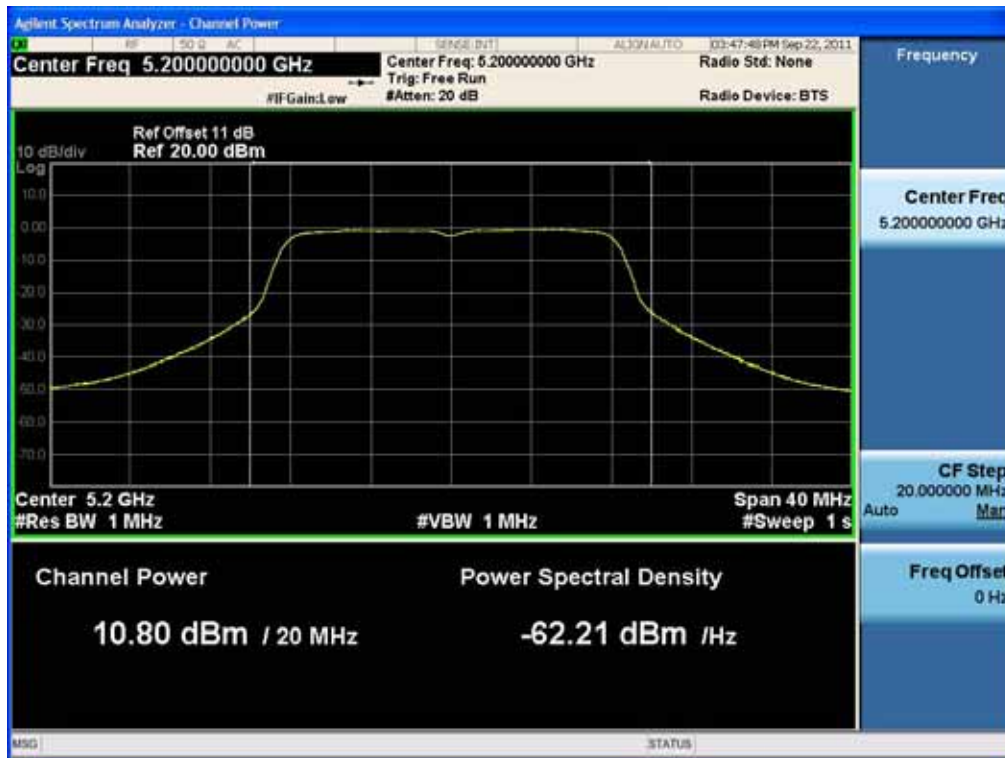


Conducted Output Power (802.11a-CH 40) 36 Mbps



FCC PT.15.247 TEST REPORT	FCC CERTIFICATION REPORT		www.hct.co.kr
Test Report No. HCTR1110FR08	Date of Issue: October 26, 2011	EUT Type: GSM/WCDMA/LTE Phone with Bluetooth / WLAN	FCC ID: JYCP4100

Conducted Output Power (802.11a-CH 40) 48 Mbps



Conducted Output Power (802.11a-CH 40) 54 Mbps



FCC PT.15.247 TEST REPORT	FCC CERTIFICATION REPORT		www.hct.co.kr
Test Report No. HCTR1110FR08	Date of Issue: October 26, 2011	EUT Type: GSM/WCDMA/LTE Phone with Bluetooth / WLAN	FCC ID: JYCP4100

Conducted Output Power (802.11a-CH 48) 6 Mbps



Conducted Output Power (802.11a-CH 48) 9 Mbps



Conducted Output Power (802.11a-CH 48) 12 Mbps



Conducted Output Power (802.11a-CH 48) 18 Mbps



Conducted Output Power (802.11a-CH 48) 24 Mbps



Conducted Output Power (802.11a-CH 48) 36 Mbps



FCC PT.15.247 TEST REPORT	FCC CERTIFICATION REPORT		www.hct.co.kr
Test Report No. HCTR1110FR08	Date of Issue: October 26, 2011	EUT Type: GSM/WCDMA/LTE Phone with Bluetooth / WLAN	FCC ID: JYCP4100

Conducted Output Power (802.11a-CH 48) 48 Mbps



Conducted Output Power (802.11a-CH 48) 54 Mbps



FCC PT.15.247 TEST REPORT	FCC CERTIFICATION REPORT		www.hct.co.kr
Test Report No. HCTR1110FR08	Date of Issue: October 26, 2011	EUT Type: GSM/WCDMA/LTE Phone with Bluetooth / WLAN	FCC ID: JYCP4100

■ RESULT PLOTS_5260 MHz ~ 5320 MHz

Conducted Output Power (802.11a-CH 52) 6 Mbps



Conducted Output Power (802.11a-CH 52) 9 Mbps



FCC PT.15.247 TEST REPORT	FCC CERTIFICATION REPORT		www.hct.co.kr
Test Report No. HCTR1110FR08	Date of Issue: October 26, 2011	EUT Type: GSM/WCDMA/LTE Phone with Bluetooth / WLAN	FCC ID: JYCP4100

Conducted Output Power (802.11a-CH 52) 12 Mbps



Conducted Output Power (802.11a-CH 52) 18 Mbps



FCC PT.15.247 TEST REPORT	FCC CERTIFICATION REPORT		www.hct.co.kr
Test Report No. HCTR1110FR08	Date of Issue: October 26, 2011	EUT Type: GSM/WCDMA/LTE Phone with Bluetooth / WLAN	FCC ID: JYCP4100

Conducted Output Power (802.11a-CH 52) 24 Mbps



Conducted Output Power (802.11a-CH 52) 36 Mbps



FCC PT.15.247 TEST REPORT	FCC CERTIFICATION REPORT		www.hct.co.kr
Test Report No. HCTR1110FR08	Date of Issue: October 26, 2011	EUT Type: GSM/WCDMA/LTE Phone with Bluetooth / WLAN	FCC ID: JYCP4100

Conducted Output Power (802.11a-CH 52) 48 Mbps



Conducted Output Power (802.11a-CH 52) 54 Mbps



FCC PT.15.247 TEST REPORT	FCC CERTIFICATION REPORT		www.hct.co.kr
Test Report No. HCTR1110FR08	Date of Issue: October 26, 2011	EUT Type: GSM/WCDMA/LTE Phone with Bluetooth / WLAN	FCC ID: JYCP4100

Conducted Output Power (802.11a-CH 60) 6 Mbps



Conducted Output Power (802.11a-CH 60) 9 Mbps



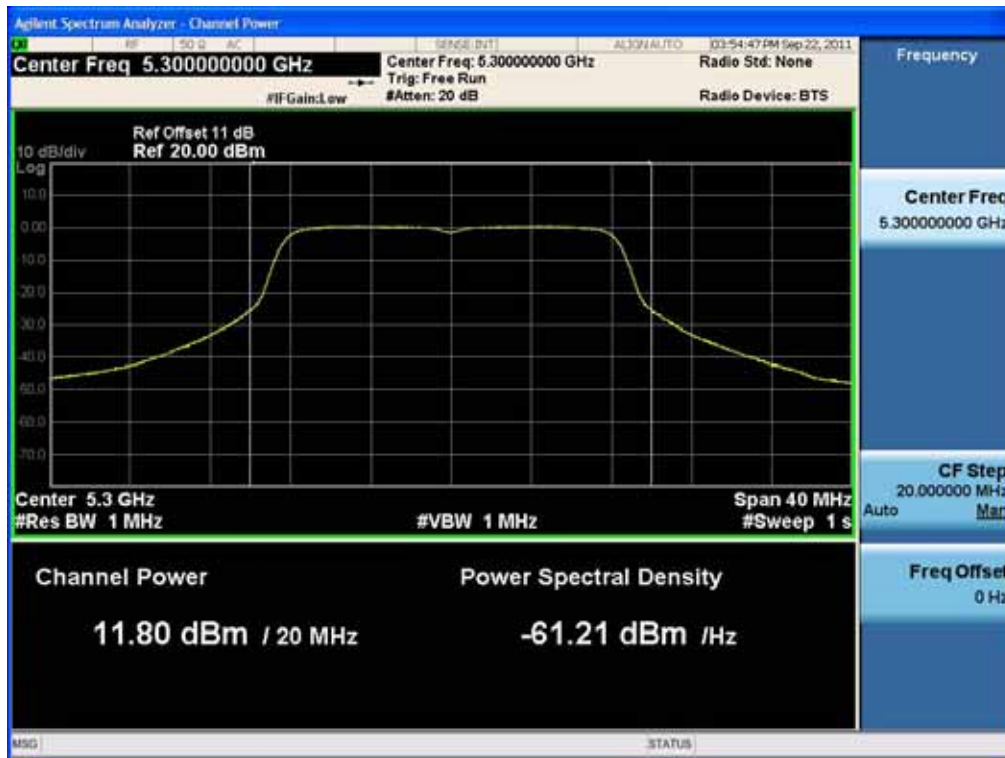
Conducted Output Power (802.11a-CH 60) 12 Mbps



Conducted Output Power (802.11a-CH 60) 18 Mbps



Conducted Output Power (802.11a-CH 60) 24 Mbps



Conducted Output Power (802.11a-CH 60) 36 Mbps



FCC PT.15.247 TEST REPORT	FCC CERTIFICATION REPORT		www.hct.co.kr
Test Report No. HCTR1110FR08	Date of Issue: October 26, 2011	EUT Type: GSM/WCDMA/LTE Phone with Bluetooth / WLAN	FCC ID: JYCP4100

Conducted Output Power (802.11a-CH 60) 48 Mbps



Conducted Output Power (802.11a-CH 60) 54 Mbps



FCC PT.15.247 TEST REPORT	FCC CERTIFICATION REPORT		www.hct.co.kr
Test Report No. HCTR1110FR08	Date of Issue: October 26, 2011	EUT Type: GSM/WCDMA/LTE Phone with Bluetooth / WLAN	FCC ID: JYCP4100

Conducted Output Power (802.11a-CH 64) 6 Mbps



Conducted Output Power (802.11a-CH 64) 9 Mbps



Conducted Output Power (802.11a-CH 64) 12 Mbps



Conducted Output Power (802.11a-CH 64) 18 Mbps



FCC PT.15.247 TEST REPORT	FCC CERTIFICATION REPORT		www.hct.co.kr
Test Report No. HCTR1110FR08	Date of Issue: October 26, 2011	EUT Type: GSM/WCDMA/LTE Phone with Bluetooth / WLAN	FCC ID: JYCP4100

Conducted Output Power (802.11a-CH 64) 24 Mbps



Conducted Output Power (802.11a-CH 64) 36 Mbps



FCC PT.15.247 TEST REPORT	FCC CERTIFICATION REPORT		www.hct.co.kr
Test Report No. HCTR1110FR08	Date of Issue: October 26, 2011	EUT Type: GSM/WCDMA/LTE Phone with Bluetooth / WLAN	FCC ID: JYCP4100

Conducted Output Power (802.11a-CH 64) 48 Mbps



Conducted Output Power (802.11a-CH 64) 54 Mbps



FCC PT.15.247 TEST REPORT	FCC CERTIFICATION REPORT		www.hct.co.kr
Test Report No. HCTR1110FR08	Date of Issue: October 26, 2011	EUT Type: GSM/WCDMA/LTE Phone with Bluetooth / WLAN	FCC ID: JYCP4100

■ RESULT PLOTS_5500 MHz ~ 5700 MHz

Conducted Output Power (802.11a-CH 100) 6 Mbps



Conducted Output Power (802.11a-CH 100) 9 Mbps



FCC PT.15.247 TEST REPORT	FCC CERTIFICATION REPORT		www.hct.co.kr
Test Report No. HCTR1110FR08	Date of Issue: October 26, 2011	EUT Type: GSM/WCDMA/LTE Phone with Bluetooth / WLAN	FCC ID: JYCP4100

Conducted Output Power (802.11a-CH 100) 12 Mbps

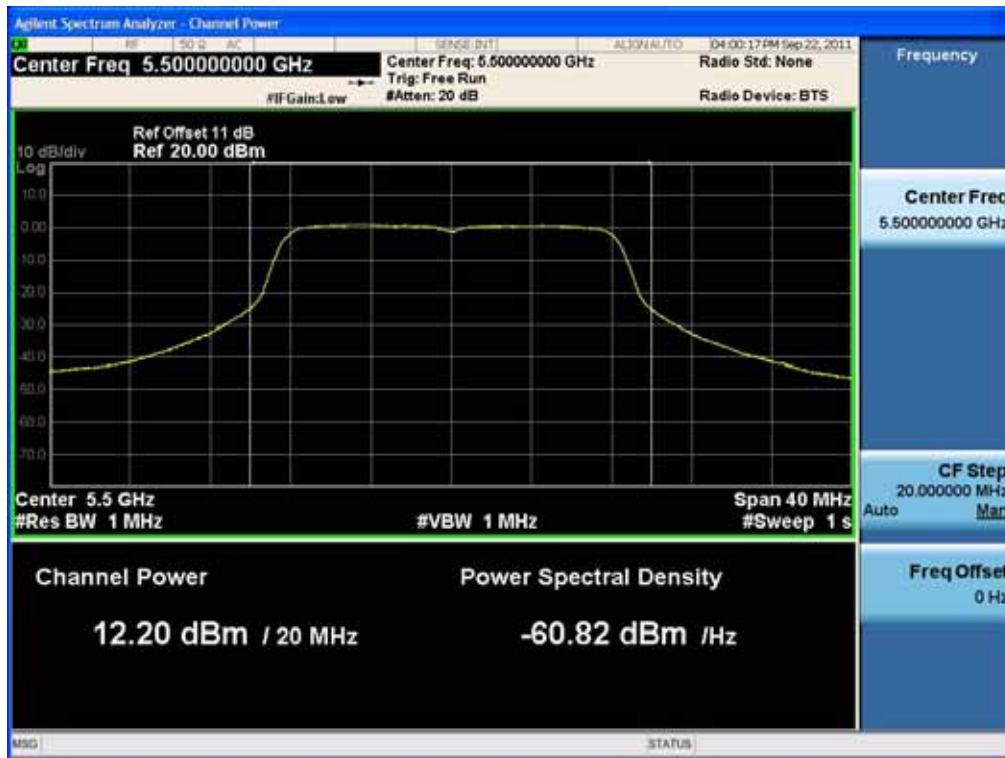


Conducted Output Power (802.11a-CH 100) 18 Mbps



FCC PT.15.247 TEST REPORT	FCC CERTIFICATION REPORT		www.hct.co.kr
Test Report No. HCTR1110FR08	Date of Issue: October 26, 2011	EUT Type: GSM/WCDMA/LTE Phone with Bluetooth / WLAN	FCC ID: JYCP4100

Conducted Output Power (802.11a-CH 100) 24 Mbps

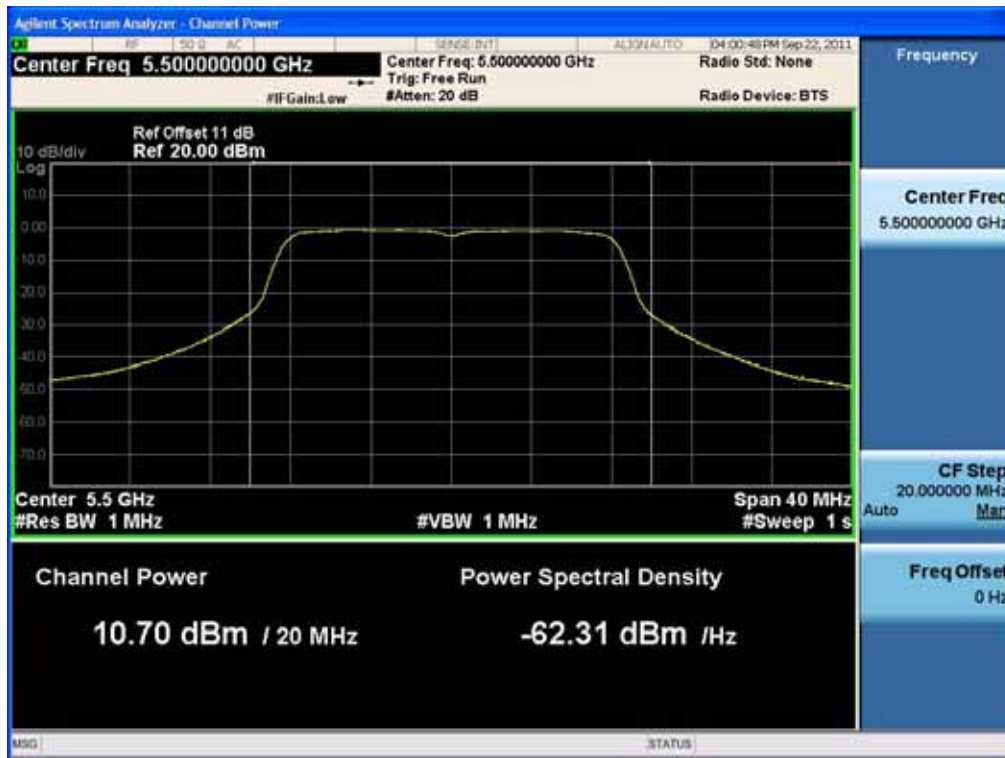


Conducted Output Power (802.11a-CH 100) 36 Mbps



FCC PT.15.247 TEST REPORT	FCC CERTIFICATION REPORT		www.hct.co.kr
Test Report No. HCTR1110FR08	Date of Issue: October 26, 2011	EUT Type: GSM/WCDMA/LTE Phone with Bluetooth / WLAN	FCC ID: JYCP4100

Conducted Output Power (802.11a-CH 100) 48 Mbps



Conducted Output Power (802.11a-CH 100) 54 Mbps



FCC PT.15.247 TEST REPORT	FCC CERTIFICATION REPORT		www.hct.co.kr
Test Report No. HCTR1110FR08	Date of Issue: October 26, 2011	EUT Type: GSM/WCDMA/LTE Phone with Bluetooth / WLAN	FCC ID: JYCP4100

Conducted Output Power (802.11a-CH 120) 6 Mbps



Conducted Output Power (802.11a-CH 120) 9 Mbps



Conducted Output Power (802.11a-CH 120) 12 Mbps



Conducted Output Power (802.11a-CH 120) 18 Mbps



FCC PT.15.247 TEST REPORT	FCC CERTIFICATION REPORT		www.hct.co.kr
Test Report No. HCTR1110FR08	Date of Issue: October 26, 2011	EUT Type: GSM/WCDMA/LTE Phone with Bluetooth / WLAN	FCC ID: JYCP4100

Conducted Output Power (802.11a-CH 120) 24 Mbps

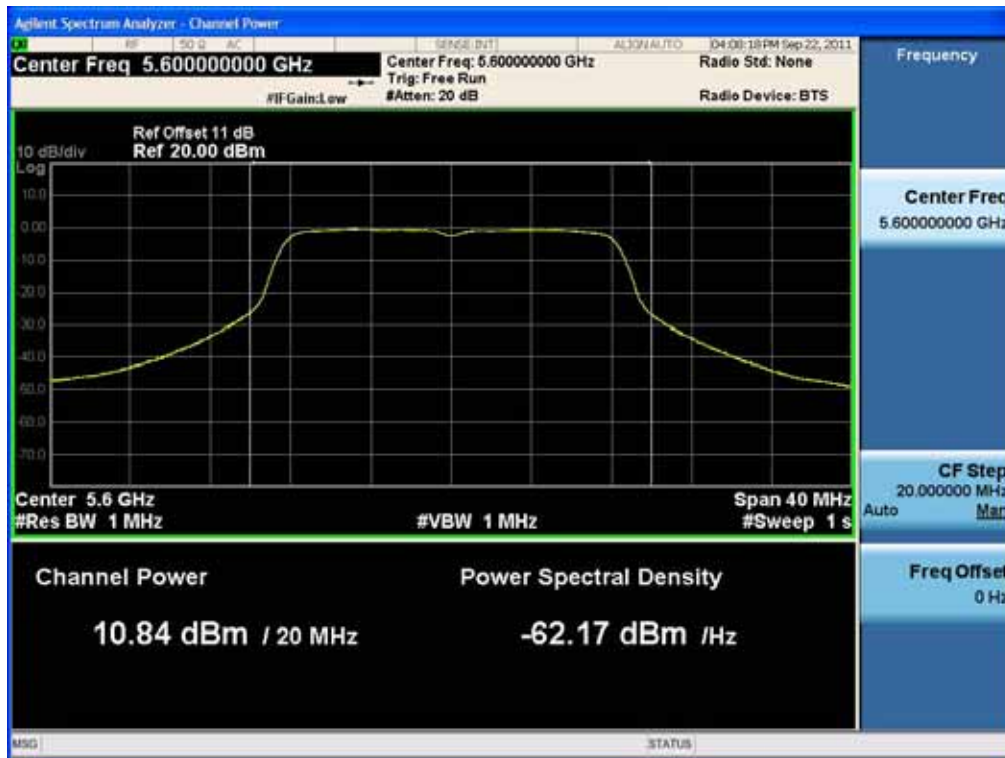


Conducted Output Power (802.11a-CH 120) 36 Mbps



FCC PT.15.247 TEST REPORT	FCC CERTIFICATION REPORT		www.hct.co.kr
Test Report No. HCTR1110FR08	Date of Issue: October 26, 2011	EUT Type: GSM/WCDMA/LTE Phone with Bluetooth / WLAN	FCC ID: JYCP4100

Conducted Output Power (802.11a-CH 120) 48 Mbps



Conducted Output Power (802.11a-CH 120) 54 Mbps



FCC PT.15.247 TEST REPORT	FCC CERTIFICATION REPORT		www.hct.co.kr
Test Report No. HCTR1110FR08	Date of Issue: October 26, 2011	EUT Type: GSM/WCDMA/LTE Phone with Bluetooth / WLAN	FCC ID: JYCP4100

Conducted Output Power (802.11a-CH 140) 6 Mbps



Conducted Output Power (802.11a-CH 140) 9 Mbps



Conducted Output Power (802.11a-CH 140) 12 Mbps



Conducted Output Power (802.11a-CH 140) 18 Mbps



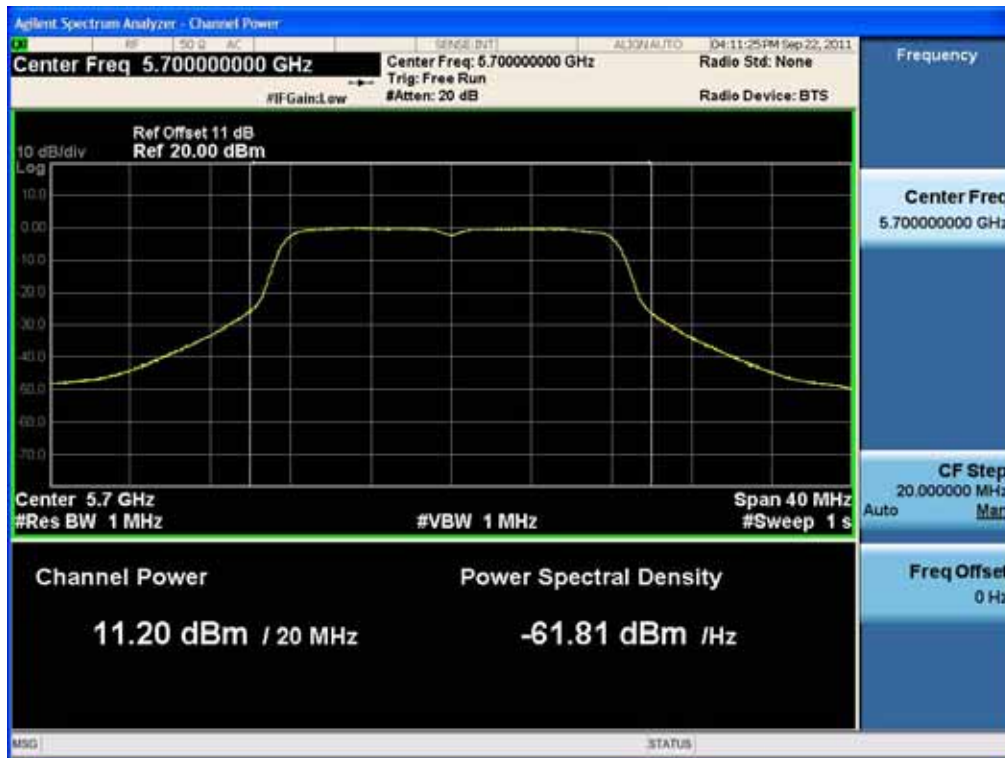
Conducted Output Power (802.11a-CH 140) 24 Mbps



Conducted Output Power (802.11a-CH 140) 36 Mbps



Conducted Output Power (802.11a-CH 140) 48 Mbps



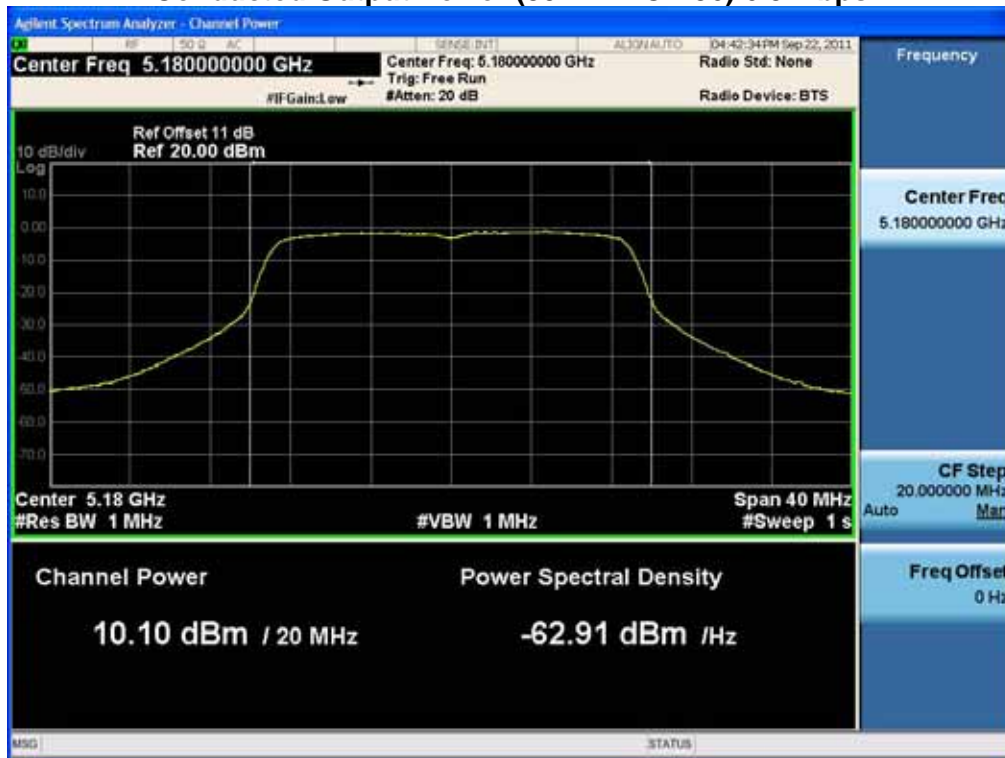
Conducted Output Power (802.11a-CH 140) 54 Mbps



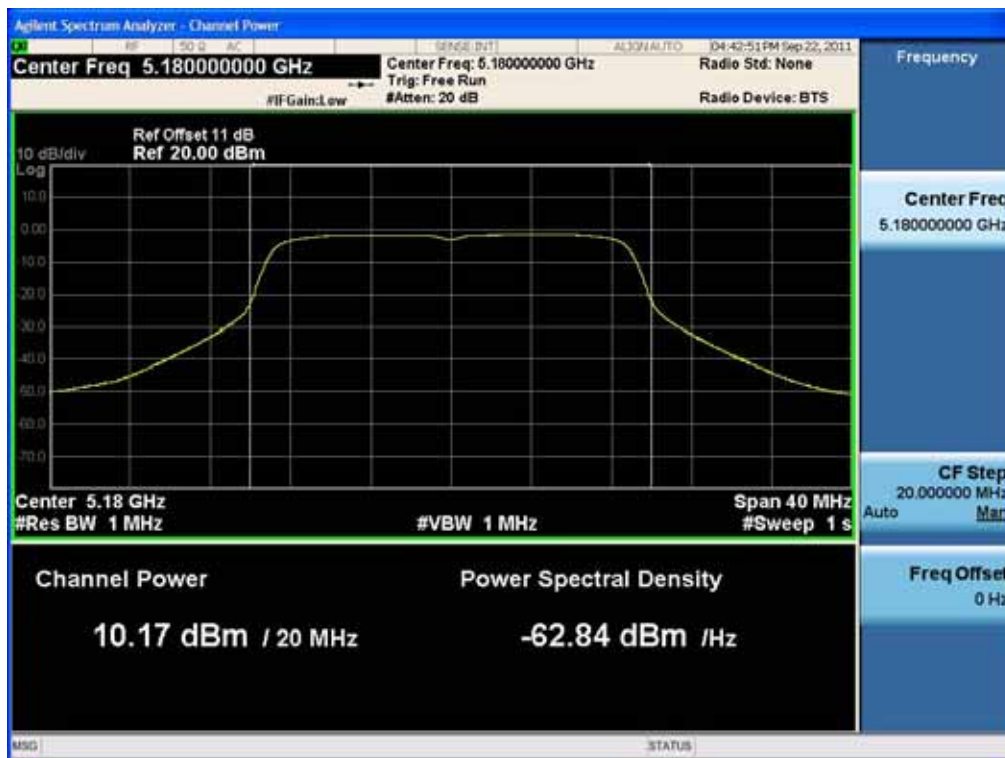
FCC PT.15.247 TEST REPORT	FCC CERTIFICATION REPORT		www.hct.co.kr
Test Report No. HCTR1110FR08	Date of Issue: October 26, 2011	EUT Type: GSM/WCDMA/LTE Phone with Bluetooth / WLAN	FCC ID: JYCP4100

■ RESULT PLOTS_5180 MHz ~ 5240 MHz

Conducted Output Power (802.11n-CH 36) 6.5 Mbps

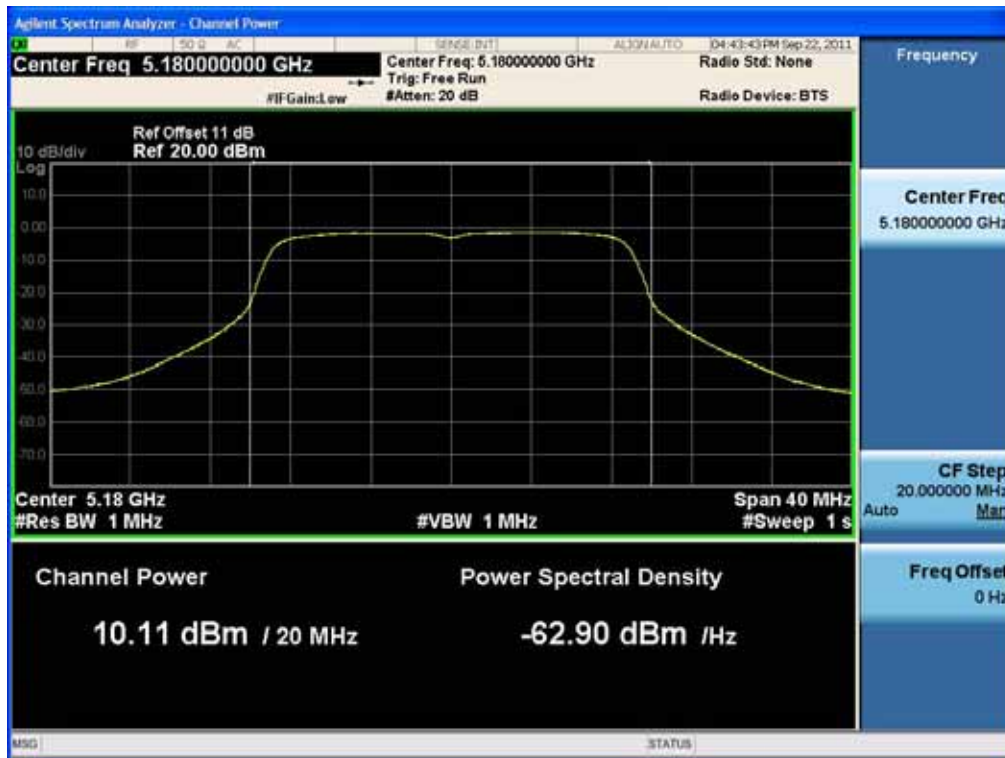


Conducted Output Power (802.11n-CH 36) 13 Mbps



FCC PT.15.247 TEST REPORT	FCC CERTIFICATION REPORT		www.hct.co.kr
Test Report No. HCTR1110FR08	Date of Issue: October 26, 2011	EUT Type: GSM/WCDMA/LTE Phone with Bluetooth / WLAN	FCC ID: JYCP4100

Conducted Output Power (802.11n-CH 36) 19.5 Mbps

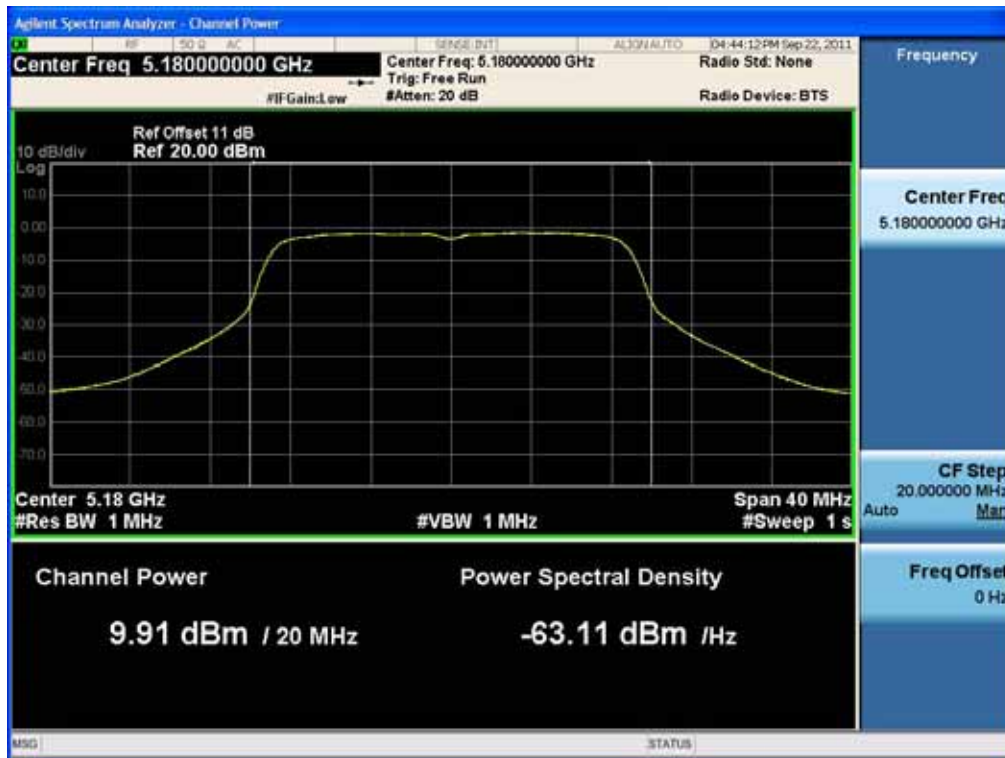


Conducted Output Power (802.11n-CH 36) 26 Mbps



FCC PT.15.247 TEST REPORT	FCC CERTIFICATION REPORT		www.hct.co.kr
Test Report No. HCTR1110FR08	Date of Issue: October 26, 2011	EUT Type: GSM/WCDMA/LTE Phone with Bluetooth / WLAN	FCC ID: JYCP4100

Conducted Output Power (802.11n-CH 36) 39 Mbps



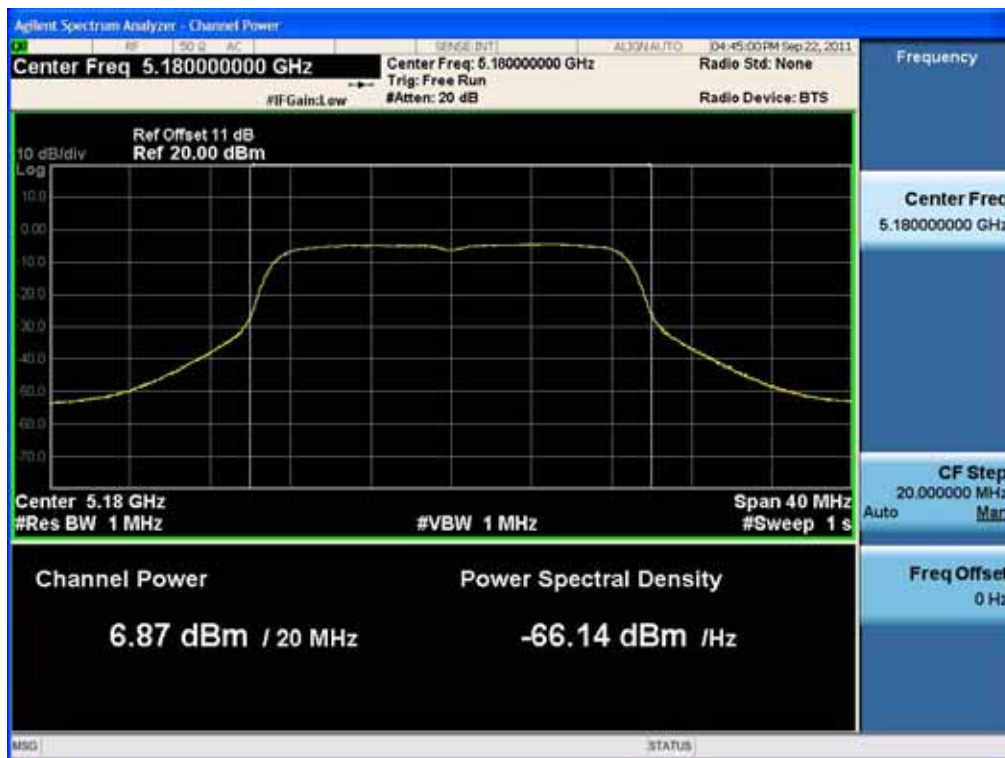
Conducted Output Power (802.11n-CH 36) 52 Mbps



Conducted Output Power (802.11n-CH 36) 58.5 Mbps



Conducted Output Power (802.11n-CH 36) 65 Mbps



Conducted Output Power (802.11n-CH 40) 6.5 Mbps



Conducted Output Power (802.11n-CH 40) 13 Mbps



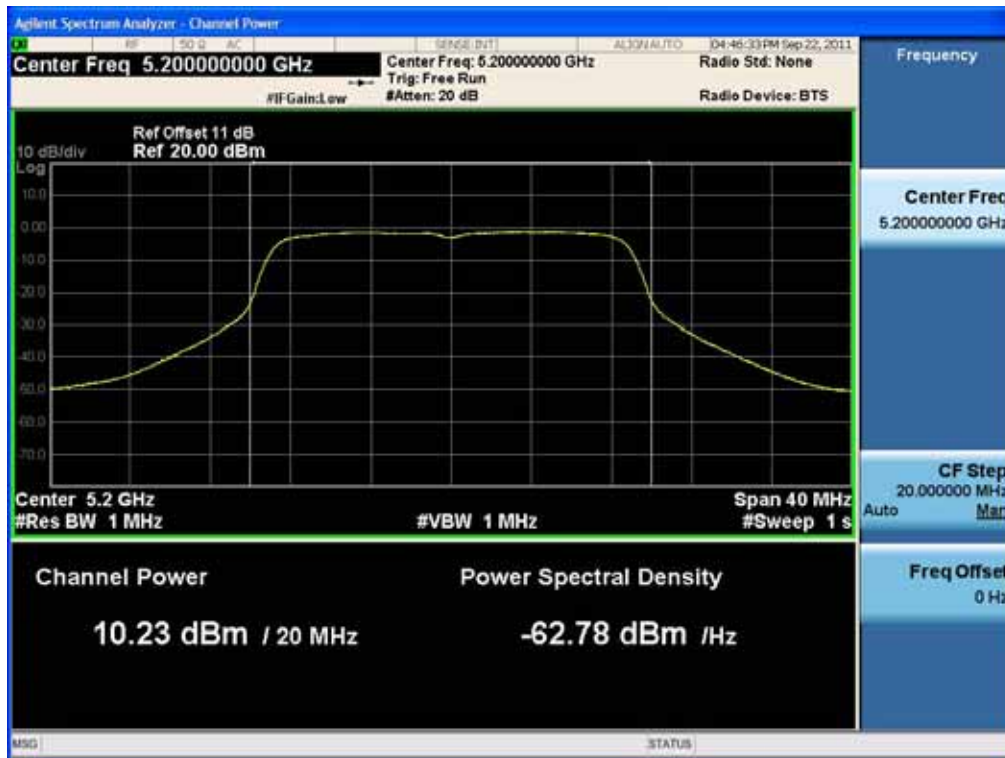
Conducted Output Power (802.11n-CH 40) 19.5 Mbps



Conducted Output Power (802.11n-CH 40) 26 Mbps



Conducted Output Power (802.11n-CH 40) 39 Mbps



Conducted Output Power (802.11n-CH 40) 52 Mbps



FCC PT.15.247 TEST REPORT	FCC CERTIFICATION REPORT		www.hct.co.kr
Test Report No. HCTR1110FR08	Date of Issue: October 26, 2011	EUT Type: GSM/WCDMA/LTE Phone with Bluetooth / WLAN	FCC ID: JYCP4100

Conducted Output Power (802.11n-CH 40) 58.5 Mbps



Conducted Output Power (802.11n-CH 40) 65 Mbps



FCC PT.15.247 TEST REPORT	FCC CERTIFICATION REPORT		www.hct.co.kr
Test Report No. HCTR1110FR08	Date of Issue: October 26, 2011	EUT Type: GSM/WCDMA/LTE Phone with Bluetooth / WLAN	FCC ID: JYCP4100

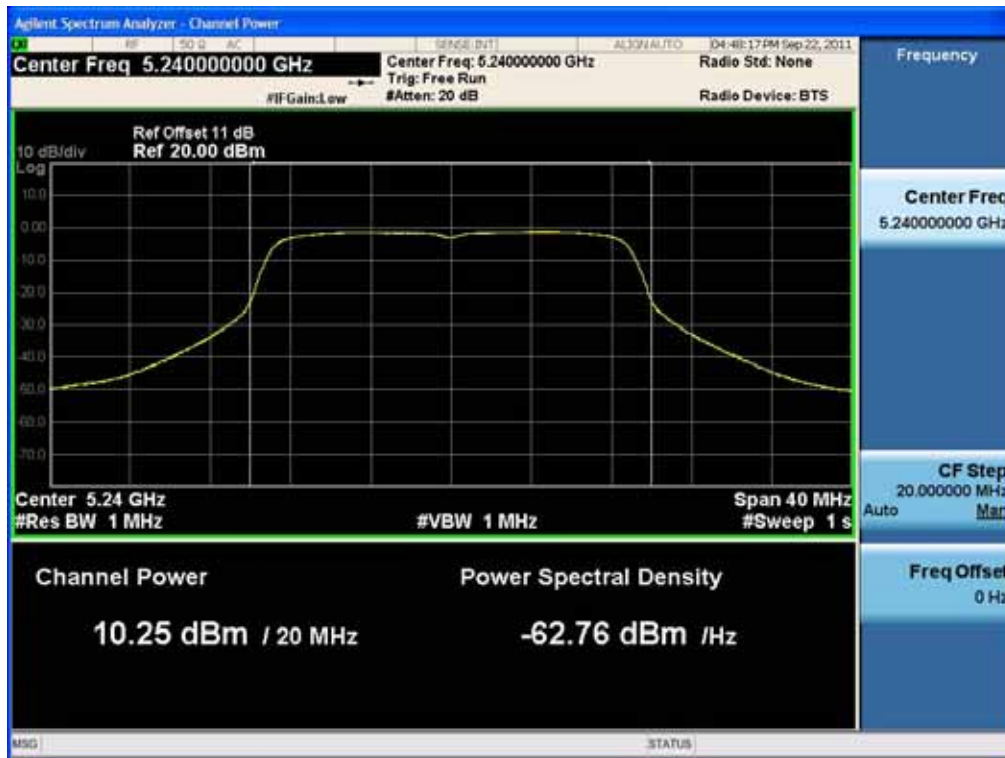
Conducted Output Power (802.11n-CH 48) 6.5 Mbps



Conducted Output Power (802.11n-CH 48) 13 Mbps



Conducted Output Power (802.11n-CH 48) 19.5 Mbps



Conducted Output Power (802.11n-CH 48) 26 Mbps



FCC PT.15.247 TEST REPORT	FCC CERTIFICATION REPORT		www.hct.co.kr
Test Report No. HCTR1110FR08	Date of Issue: October 26, 2011	EUT Type: GSM/WCDMA/LTE Phone with Bluetooth / WLAN	FCC ID: JYCP4100

Conducted Output Power (802.11n-CH 48) 39 Mbps



Conducted Output Power (802.11n-CH 48) 52 Mbps



Conducted Output Power (802.11n-CH 48) 58.5 Mbps



Conducted Output Power (802.11n-CH 48) 65 Mbps



FCC PT.15.247 TEST REPORT	FCC CERTIFICATION REPORT		www.hct.co.kr
Test Report No. HCTR1110FR08	Date of Issue: October 26, 2011	EUT Type: GSM/WCDMA/LTE Phone with Bluetooth / WLAN	FCC ID: JYCP4100

RESULT PLOTS_5260 MHz ~ 5320 MHz

Conducted Output Power (802.11n-CH 52) 6.5 Mbps



Conducted Output Power (802.11n-CH 52) 13 Mbps



FCC PT.15.247 TEST REPORT	FCC CERTIFICATION REPORT		www.hct.co.kr
Test Report No. HCTR1110FR08	Date of Issue: October 26, 2011	EUT Type: GSM/WCDMA/LTE Phone with Bluetooth / WLAN	FCC ID: JYCP4100

Conducted Output Power (802.11n-CH 52) 19.5 Mbps



Conducted Output Power (802.11n-CH 52) 26 Mbps



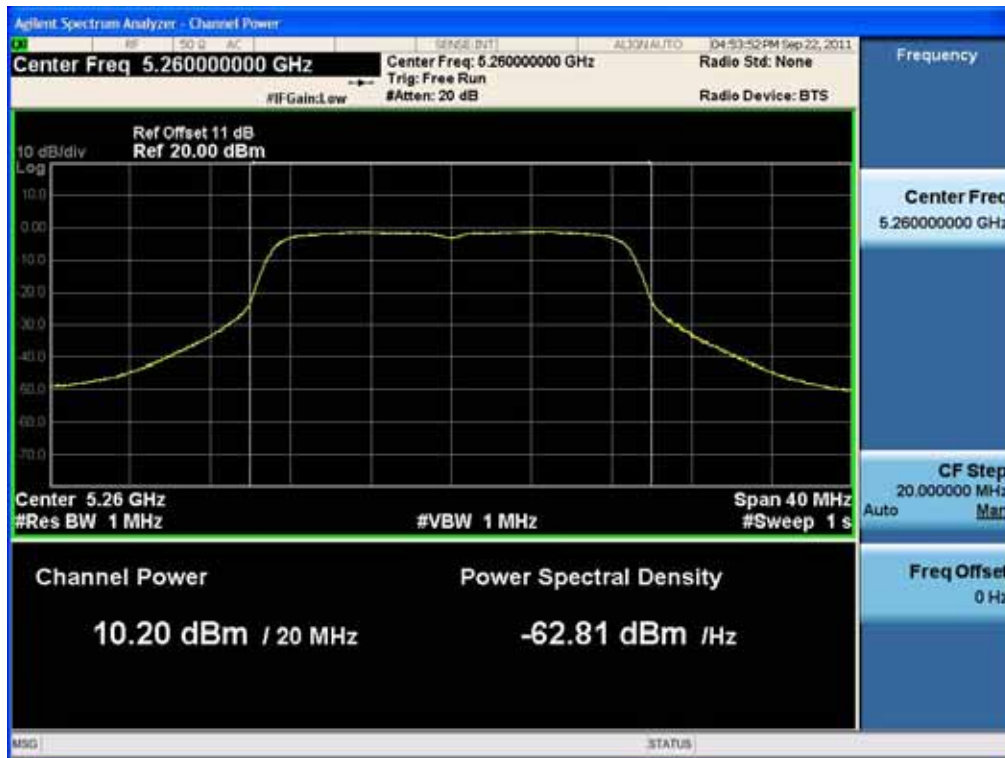
Conducted Output Power (802.11n-CH 52) 39 Mbps



Conducted Output Power (802.11n-CH 52) 52 Mbps



Conducted Output Power (802.11n-CH 52) 58.5 Mbps



Conducted Output Power (802.11n-CH 52) 65 Mbps

